



**REPLY UNDER 37 C.F.R. §1.116  
EXPEDITED PROCEDURE**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of

Antonio LOPEZ MUNOZ

Atty. Ref.: 5326-8; Confirmation No. 7871

Appl. No. 10/525,510

TC/A.U. 1796

Filed: August 16, 2005

Examiner: Sanza L. McClendon, Esq.

For: METHOD OF PRODUCING A DIGITAL PRINTING INK  
AND INK THUS OBTAINED

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October 27, 2009

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**REQUEST FOR RECONSIDERATION**

In response to the Office Action dated April 28, 2009, reconsideration and withdrawal of the rejection is respectfully requested.

The Office Action rejects claims 19-30 under 35 U.S.C. §103(a) over Marshall (USP 5,275,646) in view of Codos (USP 6,467,898). Because the primary reference by itself, or in any reasonably apparent combination with the secondary reference, does not disclose or suggest all the claimed features, the rejection is respectfully traversed.

Marshall is directed to specific ink compositions that are different than Applicant's claimed compositions. Also, Marshall's ink compositions are not produced according to Applicant's claimed methods. Aside from the differences in the compositions, Marshall teaches

methods of ink production that do not disclose or suggest the specific features or series of steps as claimed by the Applicant.

Marshall is directed to: (1) an inventive ink composition that comprises a polar conductive component (unlike the claimed method or ink invention), and (2) an ink composition that does not have a conductive component (and which is also unlike the claimed method or ink invention). Neither of Marshall's ink compositions are prepared utilizing the claimed method (see claim 19) that requires, among other things:

1. the use of a sublimatable coloring agent;
2. the sublimatable coloring agent's dispersion in a mixture of oligomers and monomers in a first step;
3. subsequently diluting that mixture of oligomers and monomers which includes the dispersed sublimatable coloring agents with a mixture of monofunctional and multifunctional acrylic monomers;
4. subsequently introducing a photoinitiator system that causes the polymerization of the oligomers and monomers from the first step; and
5. producing a polymer that sets the dispersing sublimatable coloring agents on the media.

It is also important to note that Marshall itself confirms that ink compositions and the methods of producing ink compositions involve unpredictable and complex technology. See, for example, column 1, lines 13-14 of Marshall. Thus, any modifications to the compositions or the methods disclosed in Marshall may not lead to viable ink compositions or methods of producing viable ink compositions.

The secondary reference (Codos) does not overcome the numerous deficiencies of Marshall. Codos simply suggests a method and apparatus for ink jet printing on textiles involving the critical use of partial curing and then heating. Codos does not disclose or suggest any method for producing ink. Thus, one skilled in the art would not cherry pick any particular ingredient from Codos and then insert it into the methods disclosed in Marshall. And, even if one skilled in the art did so, it would not lead to the claimed invention.

Indeed, Codos does not disclose the critical method steps in claim 19 or the sequence of those steps, and Marshall certainly does not disclose those particular claim steps or sequence of steps (as discussed above). For example, Codos does not disclose or teach when or where to employ the use of coloring agents in a method for producing inks.

Moreover, the addition of a Codos component into the Marshall method is not guaranteed to result in a viable ink composition due to the unpredictable and complex nature of ink composition technology and ink production method technology.

For at least the foregoing reasons, Applicant submits that Marshall's teachings combined in any reasonably apparent fashion with the teachings of Codos (as required by the Supreme Court in *KSR*) would not result in the claimed invention. For these reasons alone, Applicant requests the withdrawal of the obviousness rejection.

In support of the fact that the claimed methods and ink compositions are not obvious, Applicant is also herewith submitting a Declaration signed by the inventor, Mr. Antonio Lopez Munoz. As explained in the Declaration, the particular sequence of steps as recited in claim 19 result in the production of a digital printing ink which very well suited for use in a digital printing apparatus that prints onto textile materials. Once printed onto a textile by a digital

printer, the claimed printing inks are extremely stable, thus ensuring that the printed images are not distorted or faded over time, or by washing and drying of the textile material.

In further support of the particular utility and advantages afforded by the claimed methods and ink compositions, Applicant has also enclosed photos that illustrate the result of an experiment that was conducted to show that the claimed ink compositions are superior to conventional pigmented inks. During the experiment, two different images were printed on the same type of a textile material. The photo with the heading "dispersing dye" shows the textile material after an image was printed using a digital printing ink as claimed, and as was made by the claimed methods. The photo headed "pigment" shows the textile material after an image was printed using a conventional pigmented ink.

In each case, the printed textile was cut into two portions, and the portions labeled 1a and 2b were hand washed in the same detergent solution at a temperature of approximately 50°C. Both portions were then machine dried for approximately 20 minutes. The resulting washed and dried portions 1a, 2a were then placed adjacent the un-washed portions 1b, 2b. This allows one to see how well the ink compositions can withstand the washing and drying operations.

As is apparent from the two photos, the image printed using the claimed ink composition was virtually unchanged by the washing and drying operations. In contrast, the image printed with the conventional pigmented ink was noticeably deteriorated by the washing and drying operations. Note that the darker portions of the image faded to white in certain locations, and even the lighter colored portions of the image are not longer as dark or as clear.

The experimental results show that a method as claimed results in the generation of a digital printing ink that is superior to conventional pigmented inks. The particular steps recited in claim 19, as well as the order in which the steps are performed, lead to these superior qualities.

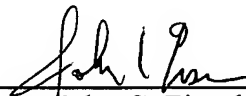
While the Office Action appears to suggest that performing steps of a method in an alternate order is obvious, the experimental results show that performing the steps in the recited order lead to unexpectedly good results. For these additional reasons, it is respectfully submitted that the claimed methods and ink compositions are not obvious in view of the Marshall or Codos references.

Applicant submits that the application is in condition for allowance and earnestly solicits a notice to that effect. If the Examiner has any questions concerning this application, the undersigned can be contacted at 703-816-4009.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By:

  
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Enclosures: Declaration  
Photos of Experimental Results

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